

REMARKS

The present Amendment is in response to the Examiner's Office Action (hereinafter referred to as the "Office Action") mailed May 14, 2008. By this paper, claim 17 is amended. Claims 1-9 and 11-21 are now pending in view of the above amendments.

Reconsideration of the application is respectfully requested in view of the above amendments to the claims and the following remarks. For the Examiner's convenience and reference, Applicant's remarks are presented in the order in which the corresponding issues were raised in the Office Action.

I. General Considerations

Applicant notes that the remarks and amendments presented herein have been made merely to clarify the claimed embodiments from elements purported by the Examiner to be taught by the cited references. Such remarks, or a lack of remarks, and amendments are not intended to constitute, and should not be construed as, an acquiescence, on the part of the Applicant: as to the purported teachings or prior art status of the cited references; as to whether it is proper to combine the cited references, as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case. Applicant reserves the right to challenge the purported teaching and prior art status of the cited references, as well as the whether it is proper to combine references, at any appropriate time.

In addition, the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the distinctions between any cited references and the claimed invention. Rather, the distinctions identified and discussed herein are presented solely by way of example. Consistent with the foregoing, the discussion herein is not intended, and should not be construed, to prejudice or foreclose contemporaneous or future consideration, by the Applicant, of additional or alternative distinctions between the claims of the present application and the references cited by the Examiner, and/or the merits of additional or alternative arguments.

II. Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 1, 4, 7-9, 11, 13-15, 17, 18, and 21 under 35 U.S.C. § 103 as being unpatentable over *Davidson* (U.S. Publication No. 2003/0063354) in view of *Robinson et al.* (U.S. Publication No. 2002/0135845). The Examiner rejects claims 2, 3, and 5 under 35 U.S.C. § 103 as being unpatentable over *Davidson* and *Robinson et al.* and further in view of *Bayart* (U.S. Patent No. 6,069,731). The Examiner rejects claim 6 under 35 U.S.C. § 103 as being unpatentable over *Davidson* and *Robinson et al.* and further in view of *Schild et al.* (Schild: "Amplifier Array for 12 Parallel 10 Gb/s Optical-Fiber Links Fabricated in a SiGe Production Technology", IEEE Radio Frequency Integrated Circuit Symposium, 2002, page 89-92) and *Bayart*. The Examiner rejects claim 16 under 35 U.S.C. § 103 as being unpatentable over *Davidson* and *Robinson et al.* and further in view of *Schild et al.* The Examiner rejects claims 12 and 19 under 35 U.S.C. § 103 as being unpatentable over *Davidson* and *Robinson et al.* and further in view of *Bayart* and *Geller* (U.S. Patent No. 5,202,553). The Examiner rejects claim 20 under 35 U.S.C. § 103 as being unpatentable over *Davidson* in view of *Robinson et al.* and *Schild et al.*. Applicant traverses these rejections for at least the reasons that will be explained.

According to the applicable statute, a claimed invention is unpatentable for obviousness if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. § 103(a) (2005); *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966); MPEP 2142. Obviousness is a legal question based on underlying factual determinations including: (1) the scope and content of the prior art, including what that prior art teaches explicitly and inherently; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17-18; *In re Dembiczak*, 175 F.3d 994, 998 (Fed. Cir. 1999).

"The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious." MPEP 2142 (2007). Analysis supporting a rejection under 35 U.S.C. §103(a) should be made explicit. *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, (2007). Moreover, the Patent Office must identify a reason (such as motivation) why a person of ordinary skill in the art at the time of the invention would have combined the prior art elements in the manner claimed. *Id.* "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some

articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id. quoting In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006); *see also* MPEP 2142. A court should be wary of reasoning based on hindsight. *See Graham*, 383 U.S. at 36.

It is the initial burden of the PTO to demonstrate a *prima facie* case of obviousness. If the PTO does not set forth a *prima facie* case of obviousness, the Applicant is under no obligation to submit evidence of nonobviousness. MPEP 2142 (emphasis added).

Title 35 requires the analysis to examine "the subject matter as a whole" to ascertain if it "would have been obvious at the time the invention was made." 35 U.S.C. § 103(a) (emphasis added). Cases such as *Adams* (1966) demonstrated that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art."

A. Claims 1, 4, 7-9, 11, 13-15, 17, 18 and 21

As noted above, Applicant has amended independent claim 17 to recite in part "a plurality of amplifiers . . . wherein only one amplifier is activated at a given point in time and the other amplifiers are deactivated." Support for such amendments is found at least at page 3, lines 3-11, and page 6, line 34-page 7, line 2 of the originally filed specification. A similar limitation is also found in currently pending independent claim 1.

In sharp contrast, the Examiner has not shown that *Davidson*, the primary reference teaches a plurality of amplifiers . . . wherein only one amplifier is activated at a given point in time and the other amplifiers are deactivated. For example, Figure 2 of *Davidson*, which is primarily used to reject independent claims 1 and 17 shows a gain path A and a gain path B, each including at least two amplifiers. However, it is clear from Figure 2 that both amplifier paths operate simultaneously. That is, when light is received by photodiode 120, current will flow simultaneously in both gain paths. The switch 172 then selects which gain path to output based on a threshold level. (See paragraphs [0028] – [0030] of *Davidson*). In addition, claim 1 of the *Davidson* reference explicitly states ". . . the first gain path and the second gain path are configured to **simultaneously** amplify the electrical signal independently of each other." (Emphasis added).

In addition, the Examiner has not shown that *Robinson* teaches a plurality of amplifiers . . . wherein only one amplifier is activated at a given point in time and the other amplifiers are

deactivated. For example, *Robinson* in Figure 1 shows any signal measured by photodiode 12 flows through the differential amplifiers 14 and 16. As the remaining figures of *Robinson* merely show portions of amplifier 16, they cannot teach or suggest plurality of amplifiers recited in claims 1 and 17.

The other art of record does not teach or suggest all the elements of amended independent claim 17 and independent claim 1 and also does not provide the elements of amended claim 1 missing in the purported combination of *Davidson* and *Robinson*. For example, *Geller*, *Bayart* or *Schild* do not teach or disclose a plurality of amplifiers as recited in claims 1 and 17 as these references do not teach amplifiers wherein only one amplifier is activated at a given point in time and the other amplifiers are deactivated as required by claims 1 and 17.

Thus, the Office Action has not established a *prima facie* case of obviousness for amended claim 1 at least because the Office Action has failed to show that the purported combination of *Davidson* and *Robinson* teaches or suggests all the elements of claims 1 and 17. Accordingly, the obviousness rejection should be withdrawn from claims 1 and 17.

Inasmuch as claims 4, 7-9, 11, 13-15, 18 and 21 depend from claims 1 and 17, Applicant notes that these claims are not rendered obvious by the purported combination of *Davidson* and *Robinson* for at least the reasons claims 1 and 17 are not obvious in light of the cited art. Applicant thus respectfully requests that the obviousness rejection of dependent claims 4, 7-9, 11, 13-15, 18 and 21 also be withdrawn.

B. Claims 2, 3, and 5

Claims 2, 3, and 5 were rejected under 35 U.S.C. § 103(a) as being obvious over *Davidson* in view of *Robinson* and further in view of *Bayart*. As discussed above, the purported combination of *Davidson* and *Robinson* does not teach each and every element of claim 1. *Bayart* does not teach the missing elements of the purported combination of *Davidson* and *Robinson*, nor is it cited by the Office Action as teaching such. Thus, the purported combination of *Davidson*, *Robinson*, and *Bayart* does not teach each and every element of claim 1. Accordingly, based on their dependence to independent claim 1, dependent claims 2, 3 and 5 are patentable for at least the reasons that claim 1 is patentable. Applicant thus respectfully asks that the obviousness rejection be withdrawn from claims 2, 3, and 5.

C. Claims 6, 16, and 20

Claims 6, 16, and 20 were rejected under 35 U.S.C. § 103(a) as being obvious over *Davidson* in view of *Robinson* and further in view of *Schild*. As discussed above, the purported combination of *Davidson* and *Robinson* does not teach each and every element of independent claims 1 and 17. *Schild* does not teach the missing elements of the purported combination of *Davidson* and *Robinson*, nor is it cited by the Office Action as teaching such. Thus, the purported combination of *Davidson*, *Robinson*, and *Schild* does not teach each and every element of claims 1 and 17. Accordingly, based on their dependence to independent claim 1, dependent claims 6 and 16 are patentable for at least the reasons that claim 1 is patentable. In addition, based on its dependence to independent claims 17, dependent claim 20 is patentable for at least the reasons that claim 17 is patentable. Applicant thus respectfully asks that the obviousness rejection be withdrawn from claims 6, 16, and 20.

D. Claims 12 and 19

Claims 12 and 19 were rejected under 35 U.S.C. § 103(a) as being obvious over *Davidson* in view of *Robinson* and further in view of *Bayart* and *Geller*. As discussed above, the purported combination of *Davidson*, *Robinson*, and *Bayart* does not teach each and every element of independent claims 1 and 17. *Geller* does not teach the missing elements of the purported combination of *Davidson*, *Robinson*, and *Bayart*, and is not cited by the Office Action as teaching such. Thus, the purported combination of *Davidson*, *Robinson*, *Bayart* and *Geller* does not teach each and every element of claims 1 and 17. Accordingly, based on their dependence to independent claims 1 and 17, dependent claims 12 and 19 are patentable for at least the reasons that independent claims 1 and 17 are patentable. Applicant thus respectfully asks that the obviousness rejection be withdrawn from claims 12 and 19.

CONCLUSION

In view of the foregoing, Applicant believes the claims as amended or presently pending are in allowable form and that every issue raised by the Office Action has been addressed. In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, or which may be overcome by an Examiner's Amendment, the Examiner is requested to contact the undersigned attorneys.

Dated this 15th day of September, 2008.

Respectfully submitted,

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